STATEMENT OF CONSIDERATIONS

Request by General Electric Corporate Research and Development (GE-CRD) for an Advance Waiver of Domestic and Foreign Invention Rights under DOE Cooperative Agreement No. DE-AC26-01NT41188
W(A)-01-038, CH-1082

The Petitioner, General Electric Corporate Research and Development (GE-CRD) was awarded this cost plus fixed fee contract for the performance of work entitled, "GE/Nomadics In-Well Monitoring System for Vertical Profiling of DNAPL Contaminants." The purpose of the contract is the development and validation of an in-well monitoring system to characterize vapor- and dissolved-phase dense nonaqueous phase liquids (DNAPL), such as carbon tetrachloride and trichloroethylene (TCE), in the groundwater and vadose zones. As described in the Statement of Work to this contract, the monitoring system takes advantage of low-cost, chemical sensor array technology developed by GE for long-term monitoring of environmental contaminants in groundwater wells. Nomadics Corporation will partner with GE to provide scale-up engineering, design support, prototyping, and commercialization of the in-well monitoring system. At the end of the program, an in-well monitoring system that particularly meets the needs of the DOE, and commercial users as well, will be available. The core components of the GE/Nomadics in-well monitoring system provide a foundation that can be expanded with enhanced capabilities that will change how groundwater wells are monitored for organic contaminants and how contaminant plumes are delineated.

The program has several objectives: adapt GE's sensor array technology to meet DOE needs; integrate the sensor probe into an in-well monitoring system; demonstrate system capabilities during a pilot field test at a DOE site; perform a full-scale demonstration of the technology; and, develop a commercialization plan for the in-well monitoring system.

There is no cost sharing under this cost plus fixed fee contract. The estimated cost of phase I is $1,723,817, phase II's estimated cost is $792,063, for a total estimated cost of $2,515,880. However, as stated in response to question 6 of the attached waiver petition, GE has waived its fee of 8%. Essentially, this waiver of fee constitutes a cost share of 8% and demonstrates a commitment by GE to assist in the commercialization of any technology resulting from this project. The planned performance period is September 28, 2001 through December 31, 2002.

In its response to questions 4 and 5 of the attached waiver petition, GE states that it has engaged in the development of systems and miniaturized devices for over six years. During a three-year internally funded effort, several sensor materials and demonstrated prototypes in the laboratory and the field are the subject of currently filed patent applications, applications in progress, patent disclosure letters, and publications, as listed in Appendix A to GE's waiver petition. As further explained in response to question 6, GE states that the technology described in the proposal resulting in this award is the direct result of GE's internally funded research effort in the area of environmental monitoring. GE has invested over $3 million on the development of remote monitoring technology. Specifically, GE has supported the research, development, and testing of acoustic wave sensor technology for quantification of chlorinated solvents in groundwater from 1998 to 2000. This technology investment of nearly $1 million provided GE the capability to bring this promising technology to its current state. GE further states that it has sought a subcontractor, Nomadics, with a track record of successfully commercializing

environmental technology. Moreover, in response to question 10, GE states that with support from DOE under contract number DE-FC07-01ID14093, an invention has been made, and may prove beneficial for the subject contract and waiver. This invention, DOE S-99,077, is entitled "Family Of Polymer Materials With High Partition Coefficients For Detection Of Trace Levels Of Organic Fluids", and is listed in appendix A as RD-28750. GE is also requesting an advance patent waiver under this award (W(A)-01-031). GE's response fully demonstrates its technical competence in the field of environmental monitoring.

In its response to questions 8 and 9 of the attached waiver petition, GE-CRD states that patent ownership and protection is required to justify capital investment and business commitment in the highly competitive and cost sensitive field of environmental technology. In order for the government and GE to gain the maximum benefit from this technology, it must be commercialized. It is important to note also that no commercial product exists that fulfills the DOE requirements for long-term monitoring or rapid in-well characterization of DNAPL contamination. Discussions with the DOE Programmatic group having cognizance over this project, EM-50, indicate the DOE will be the primary beneficiary of a successful project and exploit any success for the redemption of DOE Nuclear Complex Sites such as Hanford, Paducah, Portsmouth, Pantex, Savannah River, Oak Ridge, and others.

There is strong programmatic support from EM-50 for this waiver. As background, it is noted that the Request for Proposals (RFP) from which this contract originated, DE-RP26-01NT40774, is titled "Demonstration of Innovative, Improved Field Methods for In Situ Delineation of Contamination Located in Difficult Subsurface Conditions at DOE Sites," and is related to the clean up required from years of designing, manufacturing, and testing of nuclear weapons. No cost sharing was required under the RFP, and DOE anticipated two or more cost plus fixed fee contracts. After the RFP closed, two awards were made, one to GE; the other awardee was a small business. As indicated above, this technology demonstration focuses on dense nonaqueous phase liquid (DNAPLs) contamination (carbon tetrachloride, trichloroethylene, tetrachloroethylene, and others) in difficult subsurface conditions, and improved, more cost-effective technologies that operate in these difficult conditions assess contamination. The DOE Nuclear complex sites mentioned previously all have DNAPL plumes that contaminate soil and groundwater in subsurface conditions that are difficult to access and/or hamper assessment of contamination, and this project will greatly assist the DOE in cleaning up these sites. But, input from EM-50 has also indicated that there is little profit incentive for GE to proceed with this project without an advance waiver. In this particular environmental area, the profit margin is low, and application of the technology to environmental remediation does not bring a high return. The financial investment already expended by GE as explained above also justifies a waiver in this unique situation. Moreover, according to EM-50, the true market for this technology is not sufficiently identified to warrant a twenty percent cost sharing. The market is small, and DOE requires the assistance that GE brings to this project to remediate the sites listed previously. Therefore grant of the waiver will likely expedite the attainment of successful remediation of several DOE Nuclear Complex sites.

The subject contract will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12. This waiver clause will also include a paragraph entitled U.S. Competitiveness, in which GE agrees to substantial U. S. manufacture of subject inventions (attached hereto). Additionally, GE agrees not to transfer subject inventions to any other entity unless that other entity agrees to these same requirements. The petitioner has further agreed to modification of the data clause of the subject contract (48 C.F.R. 952.227-14) by adding paragraph (k), Alternative VI, concerning contractor licensing of data.

Considering the foregoing, it is believed that granting the waiver will provide the Petitioner with the necessary incentive to invest resources in the commercialization of the results of the contract in a fashion which will make the contract's benefits available to the public in the shortest practicable time. In addition, it would appear that grant of the above requested waiver would not result in an adverse effect on competition nor result in excessive market concentration. Therefore, in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver, as set forth above, be granted.

[redacted]

Mark P. Dvorscak
Assistant Chief Counsel
Office of Intellectual Property Law

Date: Jan 14, 2002

Based on the foregoing Statement of Considerations and the representations in the attached waiver petition, it is determined that the United States and the general public will best be served by a waiver of rights of the scope described above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of this agreement, where through such modification or extension, the purpose, scope, or cost of the agreement is substantially altered.

[redacted]

Gerald G. Boyd
Deputy Assistant Secretary
Office of the Deputy Assistant Secretary for
Science & Technology

Date: _____

APPROVAL:

[redacted]

Paul A. Gottlieb
Assistant General Counsel
Technology Transfer and
Intellectual Property

Date: 2-4-02

(t) U. S. COMPETITIVENESS The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment,
license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.